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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,281	04/14/2004	Robert A. Pangrcic		6203

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CHICAGO, IL 60606

EXAMINER

MUI, CHRISTINE T

ART UNIT	PAPER NUMBER
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1797

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01/22/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/824,281		PANGRCIC, ROBERT A.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Christine T. Mui		1797	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.
2. Rejections of claims 1-20 have been withdrawn in view of Duvivier, Ness, Ogasawara, Borin Imam, Colombo, Bednarski, Bouy, Hosono, Holder, Deubel, Bol'Shakova, AZom.com, and SGL Carbon Group are withdrawn in view of the amendment and arguments. In response to the arguments filed on 25 October 2007, in regards to Duvivier, Imam, Borin, AZom.com, and SGL Carbon Group the newly amended claims are address in the new rejection below.
3. Applicant's arguments, see pages 12-13, filed on 25 October 2007, with respect to the specification and drawings, claim 18 and claim 8 have been fully considered and are persuasive. The objection of claim 18 and the rejection of claim 8 under 35 U.S.C. 112, second paragraph has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 2,907,671 to Duvivier (herein referred "Duvivier").

6. Regarding claim 1, the reference Duvivier discloses a method for coating materials with a protective layer or revetment where the coating process contemplating adhering to the surface of a given material certain substances having such relatively high melting points, such as metal, glass or other base materials. Duvivier suggest that Teflon be applied to containers that may hold things such as fuels that cannot exceed high temperature of heating up to 350 degrees Celsius. Furthermore, Duvivier discloses in an example where a protective coating is place on graphite articles such as crucible with a coating of polyethylene having a melting point of approximately 135 degrees Celsius. It is interpreted by the examiner than a graphite crucible for the use in uranium production installation may be small enough to be hand held as any container can be hand held within means of the user and the graphite article such as a crucible for holding and the coating is applied to at least part of the container such as the base, where the calcium fluoride protective coating form a firm cohesion with the graphite article forming the highly resistant coating (see column 1, lines 15-25, column 2, lines 9-27, 49-53, Example 1). It is also interpreted by the examiner that any container that is capable of holding any liquid or fluid such as an electrolyte is non-reactive to a particular point in time. If a container is used for the purposes of transferring fluids from one place to another, the container is non reactive, but will become reactive if the container is used for storage and molecules in the fluid start reacting with the container itself.

7. Regarding claims 2-6 and 9, the instant claims are directed to the intended use of the device and are not considered a limitation of the container as claimed. Furthermore, Duvivier discloses a method for applying a coating onto a container for holding such

liquids such as a fuel with a Teflon coating to prevent corrosive action by the fuel over a long period of usage and holding. Furthermore, Duvivier discloses a graphite article such as a crucible with a protective calcium fluoride coating where the coating is applied via a suitable vaporizer or particle spray gun (see column 2, lines 15-27, Example 1). It is interpreted by the examiner that a graphite article such as a crucible is able to hold contents such as an acidic electrolyte, such as sulfuric, hydrofluoric and perchloric acid as claimed. When the container is in the form of a crucible, it is an inherent property that the bottom and sides are not connected to each other so that they are exactly at a right angle but instead, will have a bow or slight curve between the two parts at their junction.

8. Regarding claim 10, the reference Duvivier discloses a method for coating materials with a protective layer or revetment where the coating process contemplating adhering to the surface of a given material certain substances having such relatively high melting points, such as metal, glass or other base materials. Duvivier suggest that Teflon be applied to containers that may hold things such as fuels that cannot exceed high temperature of heating up to 350 degrees Celsius. Furthermore, Duvivier discloses in an example where a protective coating is place on graphite articles such as crucible with a coating of polyethylene having a melting point of approximately 135 degrees Celsius. It is interpreted by the examiner than a crucible for the use in uranium production installation may be small enough to be hand held as any container can be hand held within means of the user and the graphite article such as a crucible for holding and the coating is applied to at least part of the container such as the base,

where the calcium fluoride protective coating form a firm cohesion with the graphite article forming the highly resistant coating (see column 1, lines 15-25, column 2, lines 9-27, 49-53, Example 1). It is interpreted by the examiner that when a container is in the form of a crucible, it is an inherent property that the bottom and sides are not connected to each other so that they are exactly at a right angle but instead, will have a bow or slight curve between the two parts at their junction.

9. Claims 1-6, 9-10 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 03-106371 to Imam (herein referred to "Imam").

10.

Regarding claims 1-6, 9-10 and 13-15, the reference Imam discloses a silicon carbide based crucible that is able to hold materials or substances from a mixture of silicon carbide powder and graphite flakes bound together by the carbonized residue of a binder compound. The crucible is made by pressing the mixture of silicon carbide, graphite and a binder to form a green body where then the body is subjected to "fettling" where it is machined to having spouts or handling lugs. The body is cured to remove volatiles from the binder and a glaze is applied to the crucible to protect the body against oxidation and commercial use. The crucible that is manufactured can be expected to hold substrates at temperatures as high as 1400 degrees Celsius (see pages 5 and 17). It is interpreted by the examiner that a crucible for use may be hand held and since the crucible is produced by pressing and shaping the crucible before curing, it is understood that the crucible is of a single piece of material where the glaze acts as a non-reactive coating on the crucible for prevent oxidation.

11. Claims 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 3,858,767 to Borin (herein referred "Borin").

12.

Regarding claims 10-13, the reference Borin discloses a single piece molded plastic container for storing and dispensing liquids comprising a disposable plastic cup and lid. The cup has an upper edge which terminates in vertically extending shoulders contiguous with opposite ends of an uninterrupted upper edge of a spout. The spout extends outwardly from a sidewall of the cup with the upper edge of the spout lying in a plane below the upper edge of the cup. The lid covers an open top of the cup, supports a flat flexible and resilient flap, and includes an open-bottom channel for receiving in a fluid-tight seal the upper edge and shoulders of the sidewall of the cup to releasably hold the lid on the cup. The flap is contiguous with a lid and cantilevers outwardly therefrom to normally rest on the upper edge of and seal the spout and to automatically rise from the spout as liquid in the cup presses on an underside thereof with a tipping of the cup to permit a dispensing of liquid through the spout. The container is used for holding material such as coffee or other hot beverages, but is it also interpreted by the examiner that coffee may be a liquid of a high temperature especially after immediate filling of the container (see abstract, column 1, line 7, column 2, lines 30-65, column 5, lines 10-12). Furthermore, it is interpreted by the examiner that the portion of the container that supports a flat flexible and resilient flap that is and includes an open-bottom channel for receiving in a fluid-tight seal the upper edge and shoulders of the sidewall of the cup to releasably hold the lid on the cup and the flap is contiguous with a

lid and cantilevers outwardly, is considered to be a C-channel and one flange to fluid-tight seal the container so that content are prevented from spilling over the top of the container and remain in the inner receiving portion of the container.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duvivier, and further in view of Bol'shakova et al (herein referred "Bol'shakova").

16.

Regarding claim 16, the reference Duvivier discloses the claimed invention except for the thermal conductivity of the container. Duvivier disclose that the method of coating a container such as a graphite crucible using a flame spray gun with



polyethylene and calcium fluoride particles to provide a protective coating is used so that the ultimate coated surface is rendered impervious to damaging effects of high temperatures in the order of 5000 degrees Celsius (see column 4, lines 4-14, Example 1). Bol'shakova discloses a study about the properties of graphite containing crucibles to be used in furnaces with a thermal conductivity ranges from 50 to 150 W/m\*K within the range of 40 to 120 W/m\*K disclosed (see page 246). It is interpreted by the examiner that the study conducted of the properties of graphite containing crucible can be applied to all graphite based crucibles for normal use in a furnace for drying products. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the single piece crucible made of graphite with the thermal conductivity ranges of 40 to 120 W/m\*K disclosed in the instant claim, in order for the container to conduct heat to the sample within the container effectively without heating or cooling too quickly in experimentation, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

17. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duvivier, in view of Bol'shakova as applied to claim 16 above and further in view of AZoM.com, The A to Z of Materials.

18.

Regarding claims 17-19 the reference references Duvivier and Bol'shakova disclose the claimed invention except for the properties of commercial graphite. AzoM.com disclose the graphite properties of interest that include the compressive

strength, the Young's Modulus and the bulk density that are all within the acceptable range as claimed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the container made of graphite or graphite composite using the properties of commercial graphite that are well known and already used in the art for graphite so that for economic reasons, the container can be produced on the large scale without having to find a graphite or graphite composite with unique characteristics that will be difficult to find.

19. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duvivier, in view of Bol'shakova and AzoM.com as applied to claims 17-19 above and further in view of SGL Carbon Group.

20. Regarding claim 20, the references Duvivier and Bol'shakova disclose the claimed invention except for the graphite grade that is used in the construction of the container. AzoM.com discloses the properties of R7510 as a type of graphite grade that embodies all the properties in the instant claim, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the container of R 7510 as discloses in AzoM.com as a commercial graphite so that the container can be used in various applications, such as heating, cooling or analyzing.

### ***Conclusion***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine T. Mui whose telephone number is (571) 270-3243. The examiner can normally be reached on Monday-Friday 8-5; Alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTM

  
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SUPERVISORY PATENT EXAMINER